Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

a bearing on geological processes. To a large extent the author has drawn on his own work, and has provided material which it would be very difficult, if not impossible, for the geologist to obtain elsewhere. Most important are the experiments on "rhythmic precipitation" or banded structure, which is formed, for instance, when silver nitrate diffuses through a gel containing potassium bichromate. The silver chromate forms in concentric bands separated by clear interspaces, at once suggestive of the ring structure of the agate.

In applying the results of the experiments to geological structure, the author displays—for a specialist in another science—a remarkably good knowledge of geological literature. Few economic geologists would be prepared to give such an important place to lateral secretion as the agency by which veins are filled, but many objections to the theory are met by reference to actual experiment. The chief value of the book lies in the application of "rhythmic precipitation" to agate structure, banded flints, eozoön, banded clay concretions, and "weathering rings." The treatment of alternating gold and pyrite layers in quartz from the same point of view will be subjected to question. The author has at least added another to the explanations which have been offered for the gold deposits of the Rand.

Without doubt the author has provided geologists with material which will be the means of opening up a new and fascinating field for investigation in the very near future.

R. C. WALLACE

Fosseis Devonianos do Paraná. By DR. JOHN M. CLARKE. "Monographias do Servico Geologico e Mineralogico do Brazil," Vol. I. Rio de Janeiro, 1913.

In his recent monograph on the Devonian faunas of the southern hemisphere Dr. Clarke has placed Brazil in the same position of honor in the southern continent that New York has always held in North America, as the holder of the standard Devonian column and geologic record of that time. The work in its philosophic treatment and broad learning, as well as in its perfection of illustration and text, is beyond all criticism.

The paleogeography of the Devonian is discussed thoroughly, and a map is given showing the distribution of land and water in that age, to express the relations of the faunas. This map shows the austral continent connecting South America with South Africa, some central island masses in northern South America and central Africa, and the great boreal continent connecting North America with Eurasia. The austral faunas flourished on the northern strand of the austral continent, separated from the northern facies by the broad central ocean. The two types seem to have sprung from the same Silurian ancestors, to have diverged slightly in isolation under the influence of their environment, but to have developed along similar lines on account of "long-standing impulses in definite development which realize themselves notwithstanding conditions of geographic isolation." It would seem that we have here one of the most remarkable and definite cases of orthogenesis in the world's history.

There are in the fauna thirteen species of Trilobites of the genera *Homalonatus*, *Cryphaeus*, *Calmonia*, *Proboloides*, *Pennaia*, rarely agreeing fully with their boreal kindred, but usually differing subgenerically, at least. The Cephalopoda are represented by only two species, *Orthoceras* and *Kionoceras*. *Conularia* is abundant, and the Pteropods have one genus *Hyolithus*. Gastropods are not abundant, having only six species. The Pelecypods are abundantly represented by twenty-four species of *Palaeoneilo*, *Nuculites*, *Nuculana*, *Janeia*, *Leptodomus*, *Modiomorpha*, *Sphenotus*, *Pholadella*, etc. The complete absence of the Aviculids and Pterineids shows a sharp contrast with the northern Devonian faunas, as does also the overwhelming development of the Taxodonts (Arcacea) in both numbers and size. The Brachiopods are numerous with twenty-four species of which the most noteworthy are *Spirifer jheringi*, *S. antarcticus*, *S. kayserianus*, and the numerous *Schuchertella*, *Leptostrophia*, *Chonetes*, and Discinacea. There are two starfishes and two sponges. Corals are almost entirely lacking, and Bryozoöns completely so.

The volume is illustrated by twenty-seven beautiful lithographed quarto plates of fossils done in the best style of Werner and Winter of Frankfort, that make the best of half-tones look tawdry in comparison. There are also several excellent text-figures.

Brazil may well be proud of the first volume of the monographs of its geological survey, for it has set an unusually high standard in subject-matter and in mechanical execution.

JAMES PERRIN SMITH

LELAND STANFORD JUNIOR UNIVERSITY